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AMSAT NEWS SERVICE
ANS-039

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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ANS-039 AMSAT News Service Weekly Bulletins

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 >From AMSAT HQ KENSINGTON, MD.
DATE February 8, 2015
To All RADIO AMATEURS
BID: $ANS-039.01

AMSAT-UK Colloquium 2015 – Call For Speakers

This is the first call for speakers for the AMSAT-UK Colloquium 2015 which will be held from Saturday, July 25 to Sunday, July 26 2015 at the Holiday Inn, Guildford, GU2 7XZ, United Kingdom.

http://amsat-uk.org/colloquium/colloquium-2015/

AMSAT-UK invites speakers, to cover topics about micro-satellites, CubeSats, Nanosats, space and associated activities, for this event.

They are also invited to submit papers for subsequent publishing on the AMSAT-UK web site. We normally prefer authors to present talks themselves rather than having someone else give them in the authors' absence. We also welcome "unpresented" papers for the web site.

Submissions should be sent *ONLY* to G4DPZ, via the following routes:
e-mail: dave at g4dpz dot me dot uk
Postal address at http://www.qrz.com/db/G4DPZ

AMSAT-UK also invite anyone with requests for Program Topics to submit them as soon as possible to G4DPZ. Invitations for any papers on specific subjects will be included in the future call. Likewise if anyone knows of a good speaker, please send contact and other information to G4DPZ.

[ANS thanks Dave, G4DPZ and AMSAT-UK for the above information]

Navassa K1N Satellite Operation Supported by AMSAT-NA

AMSAT Vice President Operations, Drew Glasbrenner, KO4MA reported on his work to enable amateur satellite operation via FO-29 by the K1N Navassa Island DXpedition. To support operation on the linear passband of FO-29, Drew said AMSAT provided a Yaesu FT-817 radio and associated equipment, pass predictions, operational plan, and training. Operation in the linear passband of FO-29 maximizes the number of contacts possible.

The K1N satellite operator is Gregg, W6IZT although others may also participate. Gregg will be operating half-duplex with the Yaesu FT-817 (provided by AMSAT) and an Arrow antenna. Gregg has pass prediction information for FO-29 and SO-50, for all passes that are 20 degrees or higher at the island (thanks to John K8YSE for preparing those). While the focus will be on FO-29, it is possible they may try SO-50 as well. Gregg mentioned to Drew that satellite operations are more likely in the second half of the expedition as opposed to the first half.

Drew described the satellite operating configuration:

+ The radio is programmed with 5 split-band memory channels for SO-50.

+ The VFOs are programmed for FO-29 operation with a fixed uplink of 145.980, for a downlink at 435.813 to 435.827 depending on Doppler shift.

+ IMPORTANT NOTE - Gregg will be tuning his receive for replies, and may not be listening directly on his own downlink. Calling while he is transmitting will not work since he is half-duplex. (This is much the same way other rovers such as KL7R and UT1FG operate. This particular frequency scheme was chosen to reduce QRM (both given and received). This also allows a quick tune to the beacon for antenna pointing when there are not many callers.

+ Two high quality LMR-240UF jumpers to connect directly to the Arrow antenna via the front and back antenna ports.

In conclusion, Drew said, "Gregg has my email and cell phone number. I have asked him to alert me if possible, no matter the hour, when they decide to get on FO-29, which I will pass along to the amsat-bb list and the AMSAT twitter feed immediately."

The team is still in need of financial help for the expedition. Please consider helping them out at:
http://69.89.25.185/~trexsoft/t-rexsoftware.com/k1n/donate.htm

The main Navassa DXpedition website can be viewed at:
http://www.navassadx.com

FO-29 Frequencies

Uplink Passband: 146.000 - 145.900 MHz Analog CW/SSB
Downlink Passband: 435.800 - 435.900 MHz Analog CW/SSB
Beacon: 435.795 MHz

SO-50 Frequencies

Uplink: 145.850 MHz FM 67.0 Hz CTCSS tone for access
Downlink: 436.795 MHz FM

[ANS thanks Drew Glasbrenner, KO4MA for the above information]

Successful Contact For ESA Astronaut Samantha Cristoforetti, IZØUDF
With Two Schools In Italy

Saturday, January 31, 2015 at 08:39 UTC, 09:39 local time, students at "Istituto Salesiano G. Bearzi" in Udine and Intercultura students at "Centro Giovanno XXIII" in Frascati, Roma, Italy established ARISS contact with ESA astronaut Samantha Cristoforetti, IZØUDF onboard the International Space Station. These were telebridge contacts performed by Amateur radio ground stations K6DUE, located in Maryland, USA.

Presentation Istituto Salesiano "G. Bearzi"
Brief description of the school and the amateur radio school club (if there is one): The school is a salesian school with 750 students, from 6 to 20 years old. We have also a small hostel for college students.

Presentation of Intercultura
Intercultura is the Italian representative of AFS Intercultural Programs (New York, an international, no profit, voluntary based organization that provides intercultural learning opportunities and cultural exchange programs throughout more than 60 different countries in the world, involving every year 13.000 students and an equivalent number of families and schools. In Italy, Intercultura is a no profit organization (Onlus) recognized by the Italian government, under the patronage of the Ministry of Foreign Affairs. The professional staff of Intercultura is made by 40 people who work in the headquarter of Colle Val D'Elsa (Siena) or in the PR offices based in Milan and Rome. The 4.000 affiliated volunteers are organized in 150 local chapters and offer voluntary work to promote international school based exchange programs.

Mentor Francesco De Paolis IK0WGF proposed to the radio coordinators Mr. Antonio Baldin IW3QKU and Mr. Emanuele D'Andria IØELE the sharing

of event and this was accepted. A phone conference call allowed the full sharing of the event between two contact sites involved, moderated by Mr. Peter Kofler, IN3GHZ. The sequence of questions was made alternately by the students at two contact sites involved.

Contact was established at 08:39 UTC, 09:39 local time with NA1SS via K6DUE. ESA Astronaut Samantha Cristoforetti IZØUDF answered 12 questions by students.

Samantha Cristoforetti was really very accurate in giving the answers and full of details. Signals from the ISS were good during both ISS passes, but suffering a few moments of fading.

Regional and Local Televisions and newspapers covered the event. About 500 students, parents, visitors and media attended the events at contact sites.

After the contact, Mrs. Rosa Tagliamonte and Mr. Salvatore Pignataro by ASI (Italian Space Agency) presented Cristoforetti mission and Italian contribution to International Space Station. Mr. Emanule D'Andria IØELE presented ARISS and explained how a contact with the ISS is performed via Ham Radio.

The contact established with NA1SS was live on AMSAT Italia channel: http://www.livestream.com/amsat_italia

The event was announced on ESA Portal - National News: http://www.esa.int/ita/ESA_in_your_country/Italy/Un_saluto_dalla_Terra_in_tutte_le_lingue_del_mondo._Samantha_Cristoforetti_parla_con_gli_studenti_di_Intercultura_e_di_Udine

Congratulations to IW3QKU and IØELE Teams!

[ANS thanks ARISS for the above information]

AMSAT-BR Forms in Brazil

A new AMSAT group, AMSAT-BR, has been formed in Brazil in order to better organize the Brazilian amateur satellite activities, to better represent the amateur radio community to organizations developing cubesat projects, and to attract more amateurs in different regions of the country to join our cause. AMSAT-BR has formed as a special interest group under the Liga de Amadores Brasileiros de Radio Emissão (LABRE), the national organization with the mission to represent the amateur radio community in Brazil. LABRE is registered as a member society of the International Amateur Radio Union (IARU).

Orlando Perez Filho, PT2OP, the Executive Director of LABRE sent a letter to AMSAT-NA in which he described the primary mission of AMSAT-BR will be:

+ To foster activities related to development, building, operating, and monitoring amateur radio satellites and high altitude balloons.

+ To foster activities using amateur radio satellites and high altitude balloons in STEM education.

Mr. Filho noted that collaboration with cubesat projects in Brazil gave

LABRE the opportunity to learn more about their missions and opened doors to show them that there were some needs for better alignment with the amateur radio service objectives and at the same time demonstrate that there are benefits for them to get involved with the amateur radio community. LABRE volunteered to assist some projects with the IARU frequency coordination applications leading to cubesats with significant amateur radio involvement:

+ AESP-14: A 1U educational cubesat launched to the ISS in January and deployed on February 5, 2015. The AESP-14 primary mission is to test a cubesat structure, power system, and OBC developed locally by space systems engineering students in Brazil. The project includes an amateur radio experiment in the form of reception contest where pre-defined text strings will be stored on board the spacecraft and will be randomly transmitted. The experiment was conceptualized by PY2DGS, PY2ADN, PY2JF, PY2NI, PY2UEP, and PY2SDR.

+ NCBR1: A 1U scientific cubesat using the ISIS structure and electronics. Amateurs have assisted the project with the reception and monitoring. It is being contemplated a closer collaboration with the amateur radio community for the next project (NCBR2). It is hoped that NCBR2 will include an amateur radio experiment. The main collaborators with the project are PV8DX, PY4ZBZ and PY2SDR.

+ ITASAT-1: A 6U educational cubesat being developed by engineering students at the Aeronautics Technology Institute (ITA). The cubesat will include a short text messaging store-and-forward transponder being developed by amateurs. Amateurs are also working with some high schools to use the satellite in STEM education. The experiment is being developed by PY2UEP, and PY2SDR.

+ 14BISat: A 2U educational cubesat being developed by engineering students at Fluminense Federal Technology Institute in Rio de Janeiro. PV8DX has been collaborating with the project with the design and implementation of ground stations that will be deployed to other educational institutes around the country.

+ AESP-16: A 1U educational cubesat being considered for 2016. Amateurs have been offered to include an amateur radio payload (TBD).

An additional, welcome outcome of the ongoing collaboration is that some students have already become interested in amateur radio and have obtained their amateur radio license. Some projects are even requiring that students that will operate the station get their amateur radio license as a prerequisite for participating in the project.

[ANS thanks AMSAT-BR and AMSAT-NA for the above information]

AMSAT SKN 2015 BEST FIST WINNERS

Many thanks to all who participated in AMSAT's Straight Key Night on OSCAR 2015, this year's event held in memory of Captain Charles (Chuck) Dorian, U.S. Coast Guard (Retired), W3JPT.

Activity was good despite the loss of VO-52. Our thanks to Jim Heck, G3WGV, and AMSAT-UK for keeping AO-73 in transponder mode during AMSAT SKN. AO-73 proved to be quite popular.

The following participants each received at least one Best Fist nomination from someone they worked:

AA5PK, JA1VVH, JA3PXH, JL1SAM, JM1LRA, JR0EFE, K9CIS, KT0F, N3TE, N5AFV, WA6ARA, WB5KBH, XE3ARV

Congratulations to all!

We hope you will participate in AMSAT SKN on OSCAR 2016, which will mark the 25th year that AMSAT has sponsored this fun event.

[ANS thanks Ray, W2RS for the above information]

AESP-14 CubeSat Team Requesting Receiving Assistance

On Thursday, February 5 the Brazilian satellite AESP-14 was deployed from the International Space Station (ISS) but so far no signals have been heard. The AESP-14 telemetry beacon has a power output of 500 mW and uses AX.25 on 437.600 MHz with 9600 bps GMSK modulation (G3RUH standard). It should have started transmitting 30 minutes after deployment but as of Thursday night nothing had been heard. It may be the battery did not survive several months without being recharged or the antenna may have failed to deploy.

The AESP-14 team would like to ask the help of radio amateurs around the world to forward any received telemetry frames back to the team. For this, please save the AX.25 frames in KISS format and forward the file to aesp14(a)ita.br. The satellite was sent to the ISS as cargo on the SpaceX Falcon 9 mission CRS-5. Launch had been scheduled for December 16, 2014 but was postponed three times and it wasn't until January 10, 2015 that the launch eventually took place. Since arriving at the ISS on January 12 AESP-14 has been awaiting deployment by the JEM Orbital Deployer (J-SSOD) which is in the Japanese Kibo module.

The satellite has an amateur radio experiment developed by the Americana Amateur Radio Club (CRAM). The experiment consists of the random transmission of 100 sequences of ASCII characters prefixed with the "CRAM" word that will used as part of a contest among receiving stations. The first 10 amateur radio stations that complete receiving the 100 sequences will be awarded a commemorative diploma.
Further details at
http://wabicafe.com.br/aesp14/cram.php

AESP-14 website
http://www.aer.ita.br/~aesp14

[ANS thanks the AESP-14 Team and the Southgate ARC for the above information]

AMSAT at 2015 Orlando Hamcation

The 2015 Orlando Hamcation - Orlando, FL is scheduled for Friday, February 13

through Sunday, February 15 at the Central Florida Fairgrounds, 4603 West Colonial Drive, Orlando, Florida 32808.

AMSAT will be represented all three days at two adjacent booths in the Commercial 1 main entrance building. John Papay, K8YSE will be on hand operating the sats via his remote and rover stations along with other satellite
demos. The ARISSat-1 working demo satellite will be on display along with the
Fox-1 Engineering model.

There will be an AMSAT forum held on Saturday from 12:30 till 1:30 ending with
a prize drawing for those attending. Hamcation just gets bigger and better every year, so please join us for a great weekend.

[ANS thanks Dave, AA4KN and the AMSAT Hamcation Team for the above information]

Palm Springs HamFest - March 14

The 2015 Palm Springs Hamfest will once again be held at the beautiful Palm Springs Pavilion, near the Palm Springs Baseball Stadium, Saturday, March 14 from 9 a.m. to 4:30 p.m. This year’s hamfest will offer a VE testing session before the opening of the regular event.

Admission: Still just $5 - with free parking available.
Where else can you get a day’s worth of entertainment for that?

Forums include ...

• Keynote by Gordon West
• Andre Hansen presents on Broadband Hamnet
• Dennis Kidder ("Arduino Projects for Amateur Radio") will talk about Maker Faire
• Clint Bradford will present “How to Work the Amateur Satellites with your HT”
• Bob Brehm, Chief Engineer at Palomar Engineers will present on curing RFI, working more DX and keeping your neighbors happy

Visit the event's Web site at ...

http://www.palmspringshamfest.com

[ANS thanks Clint, K6LCS for the above information]

NASA Announces University CubeSat Space Mission Candidates

NASA has selected more than dozen small research satellites that each could fit in the palm of your hand to fly in space on future rocket launches.

These cube-shaped nanosatellites, called CubeSats, which measure about four inches on each side and weigh less than three pounds, are small but pack an outsized research punch. They will enable unique technology demonstrations, education research and science missions, and will study topics ranging from how the solar system formed to the demonstration of a new radiation-tolerant computer system.

The 14 CubeSats selected are from 12 states and will fly as auxiliary payloads aboard rockets planned to launch in 2016, 2017 and 2018. They come from universities across the country, non-profit organizations and NASA field centers.

As part of the White House Maker Initiative, NASA is seeking to leverage the growing community of space-enthusiasts to create a nation that contributes to NASA’s space exploration goals. In the first step to broaden this successful initiative to launch 50 small satellites from all 50 states in the next five years, the agency has made a selection from West Virginia, one of the 21 "rookie states" that have not previously been selected by the CubeSat Launch Initiative.

The selections are part of the fifth round of the agency's CubeSat Launch Initiative. The selected spacecraft are eligible for placement on a launch manifest after final negotiations, depending on the availability of a flight opportunity. The organizations sponsoring satellites are:

+ Arizona State University, Tempe, Arizona
Asteroid Origins Satellite is a science laboratory that will be the world’s first CubeSat centrifuge. It will enable a unique set of science and technology experiments to be performed on a CubeSat to answer fundamental questions of how the solar system formed and understand the surface dynamics of asteroids and comets.

+ California State University, Northridge, California
The mission of California State University Northridge Satellite is to test an innovative low temperature capable energy storage system in space developed by NASA’s Jet Propulsion Laboratory in Pasadena that will enable future missions, especially those in deep space to do more science while requiring less energy, mass and volume.

+ Capitol Technology University, Laurel, Maryland
The Coordinated Applied Capitol Technology University Satellite (CACTUS-1) is a technological demonstration of a cost-saving communications and commanding innovation. The payload will lower investment in communications and ground systems technology by licensing conventional internet satellite providers for low earth orbit use. The CubeSat’s aerogel-based Particle Capture and Measurement instrument is the first CubeSat-based orbital debris detector to be flown in low-Earth orbit.

+ Colorado State University, Fort Collins, Colorado
The Temporal Experiment for Storms and Tropical Systems – Demonstrator (TEMPEST-D) provides risk mitigation for the TEMPEST mission that will provide the first temporal observations of cloud and precipitation processes on a global scale. These observations are important to understand the linkages in and between Earth’s water and energy balance, as well as to improve our understanding of cloud model microphysical processes that are vital to climate change prediction.

+ Cornell University, Ithaca, New York
KickSat-2 is a CubeSat technology demonstration mission designed to demonstrate the deployment and operation of prototype Sprite “ChipSats” (femtosatellites). The Sprite is a tiny spacecraft that includes power, sensor and communication systems on a printed circuit board measuring 3.5 by 3.5 centimeters with a thickness of a few millimeters and a mass of a few grams. ChipSats could enable new kinds of science and exploration missions,

as well as dramatically lower the cost of access to space.

+ Montana State University, Bozeman, Montana
A Satellite Demonstration of a Radiation Tolerant System, RadSat, is a technology demonstration of a new radiation tolerant computer system in a low-Earth orbit satellite mission to demonstrate a technology readiness level 9 of the technology.

+ NASA's Glenn Research Center, Cleveland
The Advanced eLectrical Bus (ALBus) CubeSat is a technology demonstration mission of an advanced, digitally controlled electrical power system capability and novel use of shape memory alloy technology for reliable deployable solar array mechanisms. The goals of the mission are to demonstrate efficient battery charging in the orbital environment, 100 Watt distribution to a target electrical load, flexible power system distribution interfaces, adaptation of power system control on orbit and successful deployment of solar arrays and antennas using resettable shape memory alloy mechanisms.

+ NASA's Independent Verification &Validation Program, Fairmont, West Virginia
In partnership with the University of West Virginia, the Simulation-to-Flight 1 (STF-1) mission will demonstrate the utility of the NASA Operational Simulator technologies across the CubeSat development cycle, from concept planning to mission operations. It will demonstrate a highly portable simulation and test platform that allows seamless transition of mission development artifacts to flight products.

+ Southwest Research Institute, San Antonio
The CubeSat mission to study Solar Particles over the Earth’s Poles (CuSPP) mission is space weather mission that will study the sources and acceleration mechanisms of solar and interplanetary particles near-Earth orbit. It will study magnetospheric ion precipitation in the high-latitude ionosphere. It will increase the technology readiness level of a supra-thermal ion spectrograph concept so that it may fly with reduced risk and cost on future heliophysics missions.

+ University of Central Florida, Orlando, Florida (2 CubeSats)
The CubeSat Particle Aggregation and Collision Experiment (Cu-PACE) will perform a long-duration microgravity experiments in orbit to observe novel low-speed collisions in greater numbers than possible in ground-based, parabolic and suborbital flight experiments.

+ SurfSat is a science investigation that will measure plasma-induced surface charging and electrostatic discharge measurements. It will take in-situ measurements of the ground current waveforms from chosen common spacecraft dielectric material samples, measure the spacecraft and material potentials and will use a Langmuir probe system to measure the ambient plasma environment.

+ University of Michigan, Ann Arbor, Michigan (2 CubeSats)
The Miniature Tether Electrodynamics Experiment (MiTEE) will use CubeSat capabilities to deploy a picosatellite body of approximately 8 cm × 8 cm × 2 cm from a 3U CubeSat to demonstrate and assess an ultra-small satellite electrodynamics tether in the space environment where the fundamental dynamics and plasma electrodynamics. The miniature electrodynamics tethers, which are a few meters long, have the potential to provide propellantless propulsion, passive two-axis attitude stabilization and enhanced communication utility to the next generation of small satellites.

The Tandem Beacon Experiment (TBEx) will consist of a tandem pair of CubeSats, each carrying tri-frequency radio beacons, in near identical, low inclination orbits and a cluster of diagnostic sensors on five islands in the Central Pacific sector. The science objectives and goals of TBEx are to

study how the dynamics and processes in the troposphere can act to cause variability in the behavior of the upper atmosphere and ionosphere.

+ University of North Dakota, Grand Forks, North Dakota
The Open Prototype for Educational NanoSats (OPEN) mission aims to reduce mission risk and cost for universities, researchers and other spacecraft developers through the creation of an open-hardware/open-source software framework for CubeSat development. The designs use low-cost commercial off-the-shelf parts and easily-to-fabricate printed circuit boards that can be made using the budget of $5,000 in parts for a basic spacecraft.

In the previous five rounds of the CubeSat Launch Initiative, 114 CubeSats from 29 states were selected. To date, 36 CubeSats have launched through the initiative as part of the agency's Launch Services Program's Educational Launch of Nanosatellite (ELaNa) Program. This year, four separate ELaNa missions will carry seven CubeSats.

The full NASA press release can be accessed at:
http://www.nasa.gov/content/nasa-announces-sixth-round-of-cubesat-space-mission-candidates/

[ANS thanks NASA for the above information]

2015 NASA Academy

The NASA Academy offers a 10-week summer experience for college students with emphasis on immersive and integrated multidisciplinary exposure and training. Activities include laboratory research, a group project, lectures, meetings with experts and administrators, visits to NASA centers and space-related industries, and technical presentations. Students learn how NASA and its centers operate, gain experience in world-class laboratories, and participate in leadership development and team-building activities.

The sites for the NASA Academy include the following NASA centers:

-- NASA Space Academy at Ames Research Center, Glenn Research Center and Marshall Space Flight Center, with emphasis on space exploration.
-- NASA Aeronautics Academy at Ames Research Center, Armstrong Flight Research Center, and Glenn Research Center, for students with career aspirations in aeronautics.
-- NASA Propulsion Academy at Marshall Space Flight Center, for those with interest in propulsion careers.
-- NASA Robotics Academy at Ames Research Center and Marshall Space Flight Center, with emphasis on robotics.

To be eligible to apply to any of the NASA Academy opportunities, students must be rising juniors or seniors at the undergraduate level or be at the early graduate level in an accredited U.S. college or university. Applications are due Feb. 15, 2015.

For more information and to apply online, visit https://academy.grc.nasa.gov/application-information/.

Note: Applicants must also create a student profile at http://intern.nasa.gov.

Questions about NASA Academy should be directed to NASA-Academy-Application(a)mail.nasa.gov.

[ANS thanks the NASA Education Express Message for Feb. 5, 2015 for the above information]

AMSAT Events

Information about AMSAT activities at other important events around the country. Examples of these events are radio club meetings where AMSAT Area Coordinators give presentations, demonstrations of working amateur satellites, and hamfests with an AMSAT presence (a table with AMSAT literature and merchandise, sometimes also with presentations, forums, and/or demonstrations).

*Friday, Saturday, and Sunday, 13-15 February 2015 - Orlando HAMCATION at the Central Florida Fairgrounds, 4603 West Colonial Drive, Orlando, Florida

*Saturday, 14 February 2015 – presentation for the Greater Los Angeles Mensa Regional Gathering 2015 in Los Angeles CA (Concourse Hotel at Los Angeles International Airport)

*Friday and Saturday, 20-21 February 2015 – Yuma Hamfest in Yuma AZ (Yuma County Fairgrounds, 32nd Street between Pacific Avenue & Avenue 3E, south of I-8 exit 3)

*Saturday, 7 March 2015 – Irving Amateur Radio Club Hamfest in Irving TX (west of Dallas)

*Friday and Saturday, 13-14 March 2015 – Green Country Hamfest in Claremore OK (northeast of Tulsa)

*Saturday, 14 March 2015 – Science City 2015/Tucson Festival of Books in Tucson AZ (on the University of Arizona Main Mall)

*Friday and Saturday, 20-21 March 2015 – Acadiana Hamfest in Rayne LA (west of Lafayette)

*Saturday, 21 March 2015 – Weatherford Hamfest in Weatherford TX (west of Dallas/Fort Worth Metroplex)

*Saturday, 21 March 2015 – Scottsdale Amateur Radio Club Hamfest in Scottsdale AZ (northeast of Phoenix, near AZ-101/Princess Drive)

*Saturday, 28 March 2015 – Greater Houston Hamfest and 2015 ARRL Texas State Convention in Rosenberg TX (southwest of Houston)

*Saturday, 28 March 2015 – Tucson Spring Hamfest in Tucson AZ (22nd Street, east of Columbus Blvd.)

*Friday, 3 April 2015 – presentation for the Associated Radio Amateurs of Long Beach in Signal Hill CA (Signal Hill Community Center)

*Friday, 17 April 2015 – presentation for the Oro Valley Amateur Radio Club in Tucson AZ

*Friday through Sunday, 1-3 May 2015 – ARRL Nevada State Convention in Reno NV (Boomtown Casino Hotel)

*Saturday, 2 May 2015 – Cochise Amateur Radio Association Hamfest in Sierra Vista AZ

*Thursday, 14 May 2015 – presentation for the Escondido Amateur Radio Society in Escondido CA

*Friday, Saturday, and Sunday, May 15-17 2015, Dayton Hamvention in Dayton OH (Hara Arena)

*Saturday, 6 June 2015 – White Mountain Hamfest in Show Low AZ

*Friday and Saturday, 12-13 June 2015 – HAM-COM in Irving TX (west of Dallas)

*Friday and Saturday, 7-8 August 2015 – Austin Summerfest in Austin TX

*Friday, Saturday, and Sunday, October 16-18 2015, AMSAT Symposium in Dayton OH (Dayton Crown Plaza)

[ANS thanks AMSAT-NA for the above information]

ARISS News

* An ARISS contact with schools in Italy was successful on Saturday, January 31, 2015. This was a telebridge contact with Istituto Salesiano “G. Bearzi” in
Udine and Intercultura Onlus in Milano, relayed through ground station K6DUE in
Greenbelt, Maryland. Contact was established at 08:39 UTC, 09:39 local time with NA1SS.The astronaut was Samantha Cristoforetti, IZ0UDF, using the ISS callsign NA1SS. Cristoforetti answered a total of 13 questions from the students. The contact was covered by NHK TV with 500 spectators in attendance.
(See above article)

Upcoming ARISS Contact Schedule

* A contact with students at W.T. Sampson (DoD school), Guantanamo Bay, Cuba,is scheduled for Wed 2015-02-11 15:58:00 UTC 34 deg. The contact will be
via telebridge via IK1SLD with astronaut Samantha Cristoforetti IZØUD.

WT Sampson Unit School is a K-12 DoDDS (Department of Defense Dependents Schools) school located in Guantanamo Bay, Cuba. Our school provides education
opportunities for GTMO’s students from Sure Start through 12th grade. Our students are primarily the children of military and civilian families stationed
here at Naval Station Guantanamo Bay, Cuba.

We are accredited by the North Central Association, Commission on Accreditation and School Improvement (NCA CASI). NCA CASI is part of the unified organization AdvancED whose focus is to help member schools continually
improve student performance and school conditions. Our mission is to educate,

engage, and empower each student to succeed in a dynamic world. We envision a
technologically sophisticated learning environment, supported by our families
and community, where all students attain their highest levels of success. Where understanding and appreciating diversity is an integral part of the learning process; thereby, empowering all students to become physically, mentally, and emotionally healthy citizens of the global community.

Although officially designated as a Unit School, WT Sampson is actually located on two separate campuses about 2 miles apart. Currently, there are approximately 130 students at the elementary school (SS through 5th grade) and
90 students (6th through 12th grade) at the secondary campus. Despite our small size, WT Sampson provides all students with the highest quality of education and a safe environment. The dedicated and highly qualified faculty
remains focused on the mission, vision, and philosophy of our school.

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above information]

Satellite Shorts From All Over

New Webcast - Amateur Radio Round Table

All are invited to Amateur Radio Round Table, a new series of W5KUB.com weekly webcasts. The webcast will be Tuesday nights at 8:00 PM Central Time (0200 UTC Wednesdays) at W5KUB.COM

Amateur Radio Round Table will be an informal discussion of all aspects of ham radio with the intent of allowing viewers to watch this live webcast or be a guest via Skype or Google Hangout.

To watch Amateur Radio Round Table: Go to w5kub.com, click on Live Events and sign in. If you have a W5KUB account, use your User Name and Password. If you don’t have a W5KUB account, sign in with a call or name without a password.

To be a guest on Amateur Radio Round Table: Send an email message to tom(a)w5kub.com. Prior to the show, you will be provided with information needed to join the show.

Join for fun and interesting ham radio programming. See you on the webcast

[ANS thanks Tom Medlin, W5KUB for the above information]

Fajr downlink in 70 cm band

The Iranian satellite Fajr (i.e. 'Dawn') was launched on 2015-02-02 just before 09:00 UTC from Semnan launch center with a Safir rocket. The 50 kg satellite (40387, 2015-006A), Iran's fourth satellite, has a cold gas thruster, so it can change its orbit. It carries a camera for earth observations. It should have a telemetry downlink on 437.538 MHz and a command uplink in the 2 m band.

[ANS thanks Nico, PA0DLO for the above information]

Camera to record doomed ATV's disintegration - from inside

On Monday, February 9, ESA astronaut Samantha Christoforetti will float into Europe’s space ferry to install a special infrared camera, set to capture unique interior views of the spacecraft’s break-up on reentry.

“The battery-powered camera will be trained on the Automated Transfer Vehicle’s forward hatch, and will record the shifting temperatures of the scene before it,” explains Neil Murray, overseeing the project for ESA.

“Recording at 10 frames per second, it should show us the last 10 seconds or so of the ATV. We don’t know exactly what we might see – might there be gradual deformations appearing as the spacecraft comes under strain, or will everything come apart extremely quickly?

“Our Break-Up Camera, or BUC, flying for the first time on this mission, will complement NASA’s Reentry Break-up Recorder.

“Whatever results we get back will be shared by our teams, and should tell us a lot about the eventual reentry of the International Space Station as well as spacecraft reentry in general.”

Every mission of ESA’s ATV ferry ends in the same way – filled with Space Station rubbish then burning up in the atmosphere, aiming at a designated ‘spacecraft graveyard’ in an empty stretch of the South Pacific.

But the reentry of this fifth and final ATV is something special. NASA and ESA are treating it as an opportunity to gather detailed information that will help future spacecraft reentries.

Accordingly, ATV-5 will be steered into a shallow descent compared to the standard deorbit path.

This ATV’s fiery demise will be tracked with a battery of cameras and imagers, on the ground, in the air and even from the Station itself, and this time on the vehicle itself.

ESA’s camera will not survive the reentry, expected to occur some 80–70 km up, but it is linked to the ‘SatCom’ sphere with a ceramic thermal protection system to endure the searing 1500°C.

Once SatCom is falling free, it will transmit its stored data to any Iridium communication satellites in view.

Plunging through the top of the atmosphere at around 7 km/s, it will itself be surrounded by scorching plasma known to block radio signals, but the hope is that its omnidirectional antenna will be able to exploit a gap in its trail.

If not, signalling will continue after the plasma has cleared – somewhere below 40 km altitude.

Japan’s i-Ball camera managed to gather images of its Station supply ferry breaking up in 2012. Another i-Ball was planned to fly with ATV-5, but was lost in the Antares rocket explosion last October.

The full story with photos can be found on the ESA web:
http://www.esa.int/Our_Activities/Space_Engineering_Technology/Camera_to_record_doomed_ATV_s_disintegration_from_inside

[ANS thanks the European Space Agency for the above information]

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Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
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